Overview

Stewardship is a personal, moral responsibility to care for earth's resources in the present and for the future. Students will have an opportunity to practice skills that demonstrate responsibility and stewardship through their participation in a service project benefiting a national park or local community.

Objectives

Students will be able to

- 1. explain the difference between producing goods and providing a service;
- 2. identify human, natural, and capital resources;
- 3. describe the stages of a plant's life cycle and explain why plants are valuable natural resources;
- demonstrate the cooperative skills and teamwork needed to complete a service project benefiting the school or community;
- 5. develop a personal sense of responsibility, caring, and stewardship for the environment.

Background

Economics is the "science that deals with the production, distribution, and consumption of wealth" or "having to do with the management of the income and expenditures of the household, business, community, or government." Students can learn economic concepts through the process of actually producing goods and providing services. Students should be familiar with the following economics terminology:

goods/services

goods = movable personal property, merchandise, wares services = work done or duty performed for others

producers/consumers

producers = a person who makes or manufactures consumers = a person or thing that uses or absorbs

natural, human, and capital resources

natural resources = forms of wealth supplied by nature, such as coal, lumber, land, water.

human resources = people who are able to provide a work force capital resources = commodities for use in production, such as raw materials, machinery, buildings.



SCIENCE: Life Processes – Plant: Life Cycle

HISTORY & SOCIAL SCIENCE: Economics, Civics

CHARACTER: Responsibility, Cooperation, Caring, Self-reliance, Stewardship

GRADE LEVEL 2nd – 4th Grades

VIRGINIA STANDARDS OF LEARNING

Math: 2.11, 3.8, 3.13, 4.5 Science: 2.4, 2.8, 3.8, 4.4, 4.8 English: 2.2, 2.3, 2.9, 2.10, 3.1, 3.6, 3.7, 3.8, 4.1, 4.2, 4.7, 4.8 History & Social Science: 2.7, 2.9, 2.10, 3.7, CE.3e, CE.4, CE.9, CE.12

LENGTH/DURATION

1–2 months including 1 morning for each service project at the school, community, and/or park.

MATERIALS

seeds, soil, plastic cups, books: *The Little Red Hen* and *Just A Dreamposter*, posterboard, markers, plants, mulch, shovels, spades, work gloves, supplies for lemonade stand or bake sale

VOCABULARY

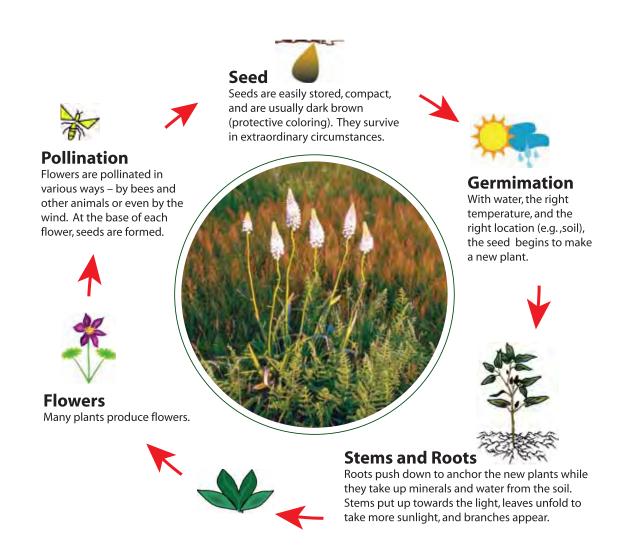
goods, services, producers, consumers, natural resources, human resources, capital resources, roots, stem, leaf, flower, fruit, seed, responsibility, cooperation, caring, stewardship

Plants and plant products are important *natural resources*. Plants provide food and drink, habitats, clothing, shelter, and medicine. A plant is a living organism that needs sunlight, water, soil, air, and space to survive. A plant goes through a series of changes in its life cycle: a seed or bulb,

sprout, root, stem, leaves, flower, and finally fruit.

Through the opportunity to plan and complete a service project, students will experience a real life application of economics and realize their abilities to contribute to society.

Plant Life Cycle



LESSON

Motivational Activity

Introduce the economics terms *goods*, *services*, *producers*, and *consumers*. Invite a local florist to the classroom to describe aspects of his/her occupation–responsibilities, pleasures, and challenges. Ask him/her to bring in a flowering plant and talk about its different parts. Ask the students the following questions: "Does the florist provide *goods* or *services*? Who is the *producer* and who is the *consumer* in the florist's business?" Discuss their answers.

Have students begin a journal, writing about the florist's visit and illustrating a labeled diagram of a plant. This journal should be maintained throughout the unit, with entries made for each activity and level of understanding.

Activities

- 1. Talk about different types of *services* which workers provide, e.g., cleaners, taxi drivers, firefighters, policemen, florists, teachers. Contrast these *services* with physical *goods*, e.g., groceries, hamburgers, pizza, baseballs, pianos, bicycles. Brainstorm lists of *goods* and *services* that students have personally received and post them on the bulletin board. Discuss the importance of having both *goods* and *services*. Ask the students if they are able to provide any *goods* or *services* for others. Have the students keep a list of their ideas in their journals.
- 2. Discuss how plants are nature's *producers*. Have the students name things plants provide to animals and people and list them on the board, e.g., types of food, oxygen,

homes for animals, shade, flowers, wood for furniture, buildings, and paper. Ask which items are the *goods* and which are *services*. Example: fruit from a tree could be considered goods while providing oxygen and shade could be considered a *service*. If plants are nature's *producers*, who are the *consumers*? Introduce the term *natural resource* and have students explain why plants are valuable resources and how plants contribute to a community and the environment.

3. Discuss the life cycle of a plant from seed to maturity and help students identify the *goods* and *services* a plant provides during its life cycle. Have students plant seeds, care for them, and enter in their journal the progress of their seed's growth.



The students may create a book or diagram to show the sequence of the plant life cycle. Have students identify the parts

of plants and the requirements for healthy growth. What things could be harmful to

plant health? Ask students what would happen if plants did not have the necessary requirements to grow and reproduce.



4. Read aloud the book *The Little Red Hen.*

Discuss the economic components involved and cooperation required for the successful production and distribution of a loaf of bread. Identify the *natural, capital,* and *human* resources represented in the book: *natural* – wheat, water, sun; *capital* – stove, rolling pin; *human* – the bread baker and other animals personified in the story. How important are plants for making the *goods* (the bread) in the story? What would happen if there were no natural resources available?

5. Introduce the concept of stewardship: being responsible caretakers of the environment now and for the future. Discuss the role of the national park Service as the steward and protector of our nation's diverse natural and cultural heritage. Discuss the goods and services National Parks provide to the nation. Create a list of each:

services - protects and preserves nature, provides places for people to enjoy the outdoors, provides ranger programs to teach visitors, preserves places that commemorate our nation's history and heritage;

goods - clean air, clean water, wildlife, forests, scenery, history, exhibits, books.

How are these goods and services different from a business like the florist's? The resources in national parks are preserved and protected for future generations



instead of being sold for economic gain. Ask the students why this is important. Why should people be concerned about caring for resources for the future?

If possible, visit a national park to experience these goods and services firsthand.

- 6. Begin preparation and completion of a service project. Refer to the students' lists of goods and services from Activity 1 (above) or refer to *Project Learning Tree:* Greenworks! or *Project Wild: Taking Action* for possible service projects that the class could perform to benefit a national, state, or local park, their school, or their community. Also see *Branch Out* lesson for an example. Possible projects:
 - growing and planting flowers in the schoolyard or community garden area;
 - spreading mulch on a path in a park picnic area or trail;
 - providing funds to help support injured or endangered animals through rehabilitation, maintenance, or a re-introductory program (example: peregrine falcons);
 - picking up litter when visiting a park or picnic area.

Select one or more of the projects and get prior approval from the recipients, school, and parents. Determine the funds and materials that are necessary to complete the project. Develop a plan on how to raise the money that is needed. List the resources - natural, capital, and human - that will be utilized. Identify and discuss how each component - producer, consumer, goods, and services –fits into the plan. Begin funding the project.



Possible funding sources:

- donations from parents through pledge cards, walkathons, or from studentearned monies at home;
- production and sale of a desired commodity: lemonade, baked goods, candy bars, bookmarks, bumper stickers, etc.;
- partnership funding and sponsorship: parent organizations, local businesses;
- funds from recycling drive: newspapers, aluminum cans.

Arrange for transportation, supplies, permission slips, and chaperones, then implement and complete each project. Upon completion, discuss the success of the project, its impact, and the economic and stewardship factors involved. Have



students write about their experiences in self-reliance, new levels of understanding, and their personal goals for future stewardship behaviors.

- 7. Create a "Circle of Service" poster for display in the school hall that illustrates the steps and accomplishments of the stewardship project that was completed.
- 8. Read aloud *Just a Dream* and discuss the future the boy dreamed about. What happened to the natural resources and the environment? Should people be concerned about caring for resources for the future? Discuss the idea that being good resource stewards today will make a difference for the future. What behaviors can people demonstrate to show care and responsibility for the environment?
- 9. Host an in-school "Service Day" to encourage students to provide services to others. Some examples could be peertutoring in reading, writing, math; sports advice and coaching; listening; guidance in good character traits shown through mini-skits; discussion groups.

Assessments

- 1. Administer pre- and post-test evaluations based on knowledge of economics, science, and character trait vocabulary words; an understanding of plant growth and contribution; and the basic components of economics.
- Create a rubric to evaluate the student book or diagram from Activity 3 (above).
 Assess the students' understanding of the life cycle of the plant. Evaluations should include correct labels for each stage of the plant's life cycle, illustrations, neatness, and effort.
- 3. Have the students express in their journals how they showed responsibility, respect, caring, and stewardship in the service project. Have them write at least one paragraph for each character trait involved.
- 4. Observe and document the students' participation in the service project and the behavior and attitudinal changes he/she feels as a result. Through writing, illustration, or conference, have students self-assess their learning.



Going Further

- Welcome parents into the classroom to provide services for the students. This might include a coaching clinic on various sports, tutoring help, reading to the students, and chaperoning on field trips.
- 2. Take a class field trip to a local florist shop or other business.
- 3. On an annual basis, have each class maintain and care for the flowerbeds at school. This commitment would be a welcome introduction to the year.
- 4. Have students create their own story about fictional or real characters contributing to society through a service project. Pre-determine and post specific guidelines and criteria for evaluating students' creative writing including content, grammar, spelling, form, and effort. They should apply the writing techniques of rough draft, re-writing, editing, final copy, and illustrations. The stories could be read and donated to the library, younger students, or a nursing home.
- 5. Read "One At A Time" (see Resources and References) aloud to illustrate each individual's impact in helping our living resources.

Related Subject Activities

- 1. Math money concepts and graphing
- 2. Art murals, posters, displays, and signs to show advertising
- 3. Music class or individual song about plants or goods and services
- 4. Drama skits to advertise the different services that student will provide

Resources and References

Project Learning Tree. Washington, DC: American Forest Foundation, 2003 Edition.

"How Plants Grow," 135-136.
"Have Seeds Will Travel," 139-141.

Project Learning Tree: GreenWorks! Connecting Community Action and Service Learning. Washington, DC: American Forest Foundation, 2001.

www.plt.org/greenworks/index.cfm

Project Wild: Taking Action. An Educator's Guide to Involving Students in Environmental Action Projects. U.S.A.: Council for Environmental Education, 1995.

www.projectwild.org/TakingAction.htm

McQueen, Lucinda. *The Little Red Hen.* USA: Scholastic, Inc., 1985.

Van Allsburg, Chris. *Just A Dream*. New York: Houghton Mifflin Co., 1990.

Canfield, Jack, and Mark Victor Hansen. *Chicken Soup for the Soul.* FL: Health Communications, Inc., 1993. "One At A Time," 22-23.

The Center for Conservation Biology Peregrine Falcon Website:

http://ccb.wm.edu/vafalcons/falconhome.cfm

The Wildlife Center of Virginia Website: www.wildlifecenter.org/

